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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,230	10/02/2003	Richard W. Pekala	27589/8:3	3559
3528	7590	03/17/2005	EXAMINER	
STOEL RIVES LLP 900 SW FIFTH AVENUE SUITE 2600 PORTLAND, OR 97204			VO. HAI	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,230

Applicant(s)

PEKALA, RICHARD W.

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1002, 0218</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/52240 in view of JP 02-155161. WO'240 teaches a battery separator comprising a polymer web comprising an ultrahigh molecular weight polyethylene (UHMWPE) having an intrinsic viscosity of at least 10 deciliters/gram with the range disclosed in the present specification (page 4, line 28, table 1). Therefore, it is the examiner's position that the UHMWPE of WO'240 would substantially provide sufficient molecular chain entanglement to impart high-strength mechanical properties to the polymer web. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. The web further comprises a silica component and an antioxidant (table 1). WO'240 uses the antioxidant commercially available under the tradename IRGANOX B-215 (table 1). This is exactly the same antioxidant employed by Applicant and therefore WO'240 implicitly discloses the use of (tetrakis[methylenen(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)] methane). The use of the antioxidant within the web indicates the presence of the antioxidant in the interior portion of the web. The polymer web is positioned adjacent an electrode structure to form a battery assembly into which is placed an electrolyte that is at

least partially absorbed by the electrode structure (page 1, lines 1-7). WO'240 does not specifically disclose the polymer web being coated with the antioxidant material. JP'161 teaches the polymer web having been with the paraffin oil containing an antioxidant material and phosphoric acid type peroxide decomposer to keep the battery separator from oxidizing deterioration at high temperature (abstract). JP'161 teaches the polymer web being immersed into the coating material. Likewise, the entire surface of polymer web is coated with the coating material. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the coating material containing an antioxidant material as shown in the JP'161 reference motivated by the desire to prevent oxidizing deterioration at high temperature.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takita et al (US 5,051,183) in view of Whear et al (US 6,120,939) and JP 02-155161, as evidenced by WO 97/45365. Takita teaches a battery separator comprising a polymer web comprising an ultrahigh molecular weight polyethylene (UHMWPE) that provides sufficient molecular chain entanglement to impart high-strength mechanical properties to the polymer web (column 1, line 12, and column 4, lines 60-65). Takita discloses the web further comprising (tetrakis[methylenen(3,5-di-tert-butyl-4-hydroxyhydrocinnamate] methane) as an antioxidant (example 1). The use of the antioxidant within the web indicates the presence of the antioxidant in the interior portion of the web. Takita does not specifically disclose the polymer web being coated with the antioxidant material. JP'161 teaches the polymer web for use in

battery separators having been with the paraffin oil containing an antioxidant material and phosphoric acid type peroxide decomposer to keep the battery separator from oxidizing deterioration at high temperature (abstract). JP'161 teaches the polymer web being immersed into the coating material. Likewise, the entire surface of polymer web is coated with the coating material. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the coating material containing an antioxidant material as shown in the JP'161 reference motivated by the desire to prevent oxidizing deterioration at high temperature.

Takita does not specifically disclose the use of a silica within the polymer web. Whear, however, teaches a battery separator comprising a polymer web comprising silica particles commercially available under the tradename WB-10 lower electrical resistivities of the battery separator (column 2, lines 40-42). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use silica particle in the polymer web motivated by the desire to lower electrical resistivities of the battery separator. The motivational statement is taken from WO 97/45365.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takita et al (US 5,051,183) in view of Whear et al (US 6,120,939) and JP 02-155161, as evidenced by WO 97/45365, as applied to claim 1 above, further in view of WO 98/52240. Takita does not specifically disclose the polymer web positioned adjacent an electrode structure to form a battery assembly into which is placed an

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electrolyte that is at least partially absorbed by the electrode structure. WO'240 supplied the missing feature. WO'240 teaches the polymer web positioned adjacent an electrode structure to form a battery assembly into which is placed an electrolyte that is at least partially absorbed by the electrode structure (page 1, lines 1-7).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the polymer web in combination with the electrode structure to form a battery assembly as shown in the WO'240 invention because such is intended use of the material and WO'240 provides necessary details to practice the invention of Takita.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-5 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of copending Application No. 10/154,937 in view of JP 02-155161. The claims of copending Application No. 10/154,937 disclose every and each element of the presently

claimed subject matter except the coating of an antioxidant material on at least one of the surfaces of the polymer web. JP'161 teaches the polymer web for use in battery separators having been with the paraffin oil containing an antioxidant material and phosphoric acid type peroxide decomposer to keep the battery separator from oxidizing deterioration at high temperature (abstract). JP'161 teaches the polymer web being immersed into the coating material. Likewise, the entire surface of polymer web is coated with the coating material. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the coating material containing an antioxidant material as shown in the JP'161 reference motivated by the desire to prevent oxidizing deterioration at high temperature.

This is a provisional obviousness-type double patenting rejection.

7. Claim 6 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of copending Application No. 10/154,937 in view of JP 02-155161 as applied to claim 1 above, further in view of WO 98/52240. The claims of copending Application No. 10/154,937 do not specifically disclose the polymer web positioned adjacent an electrode structure to form a battery assembly into which is placed an electrolyte that is at least partially absorbed by the electrode structure. WO'240 supplied the missing feature. WO'240 teaches the polymer web positioned adjacent an electrode structure to form a battery assembly into which is placed an electrolyte that is at least partially absorbed by the electrode structure (page 1, lines 1-7). Therefore, it would have been obvious

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to one having ordinary skill in the art at the time the invention was made to use the polymer web in combination with the electrode structure to form a battery assembly as shown in the WO'240 invention because such is intended use of the material and WO'240 provides necessary details to practice the invention of Application No. 10/154,937.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2004/0166415 discloses a battery separator comprising a polymer web and an antioxidant coating.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Should you have questions on access to the Private PAIR system, contact the
Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo
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